

Appl. No. 09/943,848
Reply to Office Action of July 02, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

Sub B1
Claim 1 (currently amended): In an electrically-powered device having liquid-crystal display (LCD) comprising a driver and a plurality of pixels, wherein the optical characteristics of the liquid crystal associated with each pixel are defined by the selective local application of an electrical charge, a method of conserving electrical power comprising the steps of:

receiving, in a driver of the LCD, data containing an image for display on the LCD;

determining that power-conservation mode is appropriate according to predetermined criteria received from a communications network external to the electrically-powered device;

analyzing the image data in a microprocessor of the LCD driver to determine the pixel-charging sequence required to produce the image associated with the image data;

entering power-conservation mode by modifying the pixel-activation sequence to reduce the number of pixels to which voltage is supplied; and

displaying on the LCD an image created by the modified pixel-activation sequence.

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Claim 2 (currently amended): The method of claim 1, wherein the predetermined criteria received from the communications network for entering power-conservation mode is communications network receipt of a user-entered instruction to enter power-conservation mode.

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Claim 3 (currently amended): The method of claim 1, wherein the predetermined criteria received from the communications network for entering power-conservation mode is communications network receipt of a low-power indication generated within the device.

Claim 4 (currently amended): The method of claim 1, wherein the predetermined criteria for entering power-conservation mode is communications network receipt of a reduce-power signal received through a communications network.

Claim 5 (original): The method of claim 1, further comprising the steps of:
determining that leaving power-consumption mode is appropriate according to predetermined criteria; and
leaving power consumption mode by returning to full power for all pixels.

Claim 6 (original): The method of claim 1, further comprising the step of selectively alternating the subset of no-power pixels.

Claims 7 (original): The method of claim 1, wherein the predetermined criteria for entering power-conservation mode includes an indication of the level of ambient light.

Claim 8 (original): The method of claim 1, wherein the predetermined criteria for entering power-conservation mode includes an automatically-generated timing signal.

Claim 9 (original): The method of claim 1, wherein the subset of no-power pixels is selected according to the image being displayed.

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Claim 10 (currently amended): An LCD system comprising:

an LCD display having a plurality of pixels that are variably activated to create a video image; and
an LCD driver for receiving power from a power supply and selectively providing power to activate the display pixels;
power-conservation circuitry coupled to the LCD driver for selectively applying pre-determined power-conservation criteria by reducing from full power the power level supplied to a selected subset of pixels, wherein the power-conservation circuitry is capable of interaction with a communications network external to the LCD system.

Claim 11 (original): The LCD system of claim 10, wherein the power-reduction applied to a selected subset of pixels causes no power to be sent to the selected pixel subset.

Claim 12 (original): The LCD system of claim 11, wherein the subset of no-power pixels is selected based on the image being displayed.

Claim 13 (currently amended): An improved portable electronic device for communicating with a communications network external to the portable electronic device comprising:

a receiver for receiving information from the communications network;
a liquid-crystal display (LCD) comprising a plurality of pixels for displaying images according to the information received from the communications network;
an LCD driver for receiving the received information and translating at least a portion of the information into instructions for selectively activating the pixels in order to produce an image, wherein the LCD driver determines if a power-conservation mode has been automatically selected and, if so, modifies the instructions accordingly.

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Claim 14 (canceled)

Claim 15 (currently amended): The device of claim ~~14~~ 13, wherein the automatic selection of power-conservation mode is responsive to a low-battery indication.

Claim 16 (currently amended): The device of claim ~~14~~ 13, wherein the automatic selection of power-conservation mode is responsive to a signal received from the communications network.

Claim 17 (original): The device of claim 16, wherein the signal received from the communications network is generated by the network upon detecting a device transmission strength lower than a pre-determined threshold.

all amended
Claim 18 (original): The device of claim 13, wherein the instruction modification performed if power-conservation mode has been selected includes omitting a predetermined number of pixel activations.

Claim 19 (currently amended): The device of claim ~~19~~ 18, wherein the number of omitted pixel-activations is determined as a first selected percentage of the total number of pixels to be charged during a first defined portion of the pixel-activation sequence.

Claim 20 (original): The device of claim 19, wherein approximately fifty percent of the pixel-activations are omitted.

Claim 21 (original): The device of claim 19, wherein a second selected percentage of the total number of pixels to be activated determines the omitted pixel-activations in a second defined portion of the pixel-activation sequence.